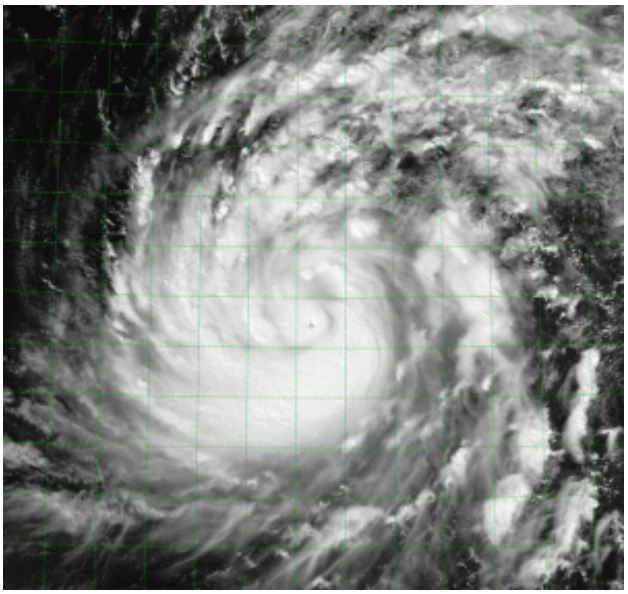
Typhoon Phanfone heading for Japan

Description

October is usually one of the most active months for tropical cyclones in the western North Pacific. These storms can affect many countries with Pacific coasts including the Philippines, China, Korea and Japan. In 2013 there were eight tropical cyclones in this region in October, most of which developed into strong typhoons.

In recent days Typhoon Phanfone has been developing in the western Pacific. Although initially far from land it has been taking a north-westward track as it has intensified and poses a threat for Japan at the weekend. On 2nd October winds were estimated at over 130 mph near the very small ‘pinhole’ eye seen in the satellite image. Phanfone has been maintaining strength since then, but the main threat comes from rain as the typhoon moves further north.



Typhoon Phanfone seen on 2 october 2014
Image courtesy of the Naval Research Laboratory, Monterey

Typhoon Phanfone poses a threat to the Japanese Grand Prix on Sunday at Suzuka, although there is still some uncertainty as to the timing of impacts over Japan. The eye of the typhoon may come ashore or pass just offshore some hours after the scheduled completion of the race.
However, typhoons in this region are renowned for producing large plumes of heavy rain which can propagate well to the north and east of the centre of the typhoon itself. Hence, heavy rain over southern Japan is likely even if the eye keeps offshore.

Elsewhere, Tropical Storm Simon has formed in the eastern North Pacific and may pose a threat to the Baja Peninsula of Mexico in a few days time. It has been a very active hurricane season in this region. Only one more storm is required for the region to have produced the largest number of storms for 22

years.

Official warnings of west Pacific tropical storms are produced by the Japan Meteorological Agency and east Pacific warnings are produced by the US National Hurricane Center. The Met Office routinely supplies predictions of cyclone tracks from its global forecast model to regional meteorological centres worldwide, which are used along with guidance from other models in the production of forecasts and guidance.

Met Office StormTracker provides a mapped picture of tropical cyclones around the globe with access to track history and six-day forecast tracks for current tropical cyclones from the Met Office global forecast model and latest observed cloud cover and sea surface temperature. We also provide updates on current tropical storms via @metofficestorms on Twitter.

Date Created
October 2014

The Met Office’s outlook to the end of 2014

Description

There are some headlines in the media today which suggest the UK faces another mild, wet and stormy winter this year based on the latest Met Office three month outlook for contingency planners.

Every month the Met Office updates its three month outlook for contingency planners, which is available for anyone to view on our website.

However, it’s not like a normal weather forecast. It’s an experimental and complex outlook based on probabilities which is designed specifically for those who plan ahead for various contingencies based on possible likelihoods.

As we’ve discussed previously, the outlook assesses the likelihood of five different scenarios for both temperature and rainfall for the whole of the UK for the whole three months, based on the most probable prevailing weather patterns.

It’s a bit like the science-equivalent of factoring the odds on a horse race and like any horse race, it’s always possible the favourite won’t win.

This is why the outlook has to be used in the right context. So it’s useful for contingency planners, but not that useful for the public who want to know when we might see unsettled weather or which weekend looks good for an outdoor event.

What does the current outlook say?

Our latest three-month outlook suggests an increased risk of milder and wetter than average conditions for the period Oct-Nov-Dec based on our seasonal forecasts and those from other leading centres around the world.

However, there are still substantial probabilities that average or opposite (ie cool and/or dry) conditions may occur. This is because there are many competing factors that determine what our weather will be like in the coming months.

The outlook also highlights an increased risk of unsettled weather relative to what is usual for the time of year, but – again – there are still reasonable chances of other scenarios.

The increased risk of more unsettled than average conditions does not mean the late autumn and early winter will necessarily be like that of last year.

Some more context on the outlook

The outlook suggests that the risk of our weather coming in from the Atlantic, which brings unsettled

conditions, increases from mid-October through November and December.

This is a fairly typical set up for the time of year, when we do expect unsettled weather, but the outlook does suggest the risk of more unsettled than normal conditions.

As the outlook covers the transition from autumn into the start of winter, there will be big changes in how UK weather is influenced by prevailing weather patterns during the period.

The current settled conditions bring us generally warm weather in early autumn, but the same weather pattern in winter would likely bring cold weather in from the rapidly cooling continent.

Date Created
October 2014

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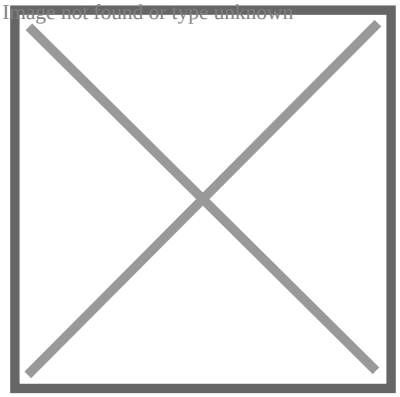


Strong winds and heavy rain affect parts of the UK

Description

After an exceptionally dry September, the UK has seen its first bout of widespread heavy rain and strong winds so far this autumn. An area of low pressure centred close to Iceland has driven a cold front eastwards across Britain, bringing unsettled weather, particularly in the west.

Highest rainfall totals

Some of the highest rainfall totals are shown below (between 10pm (5th October) to 10am (6th October):

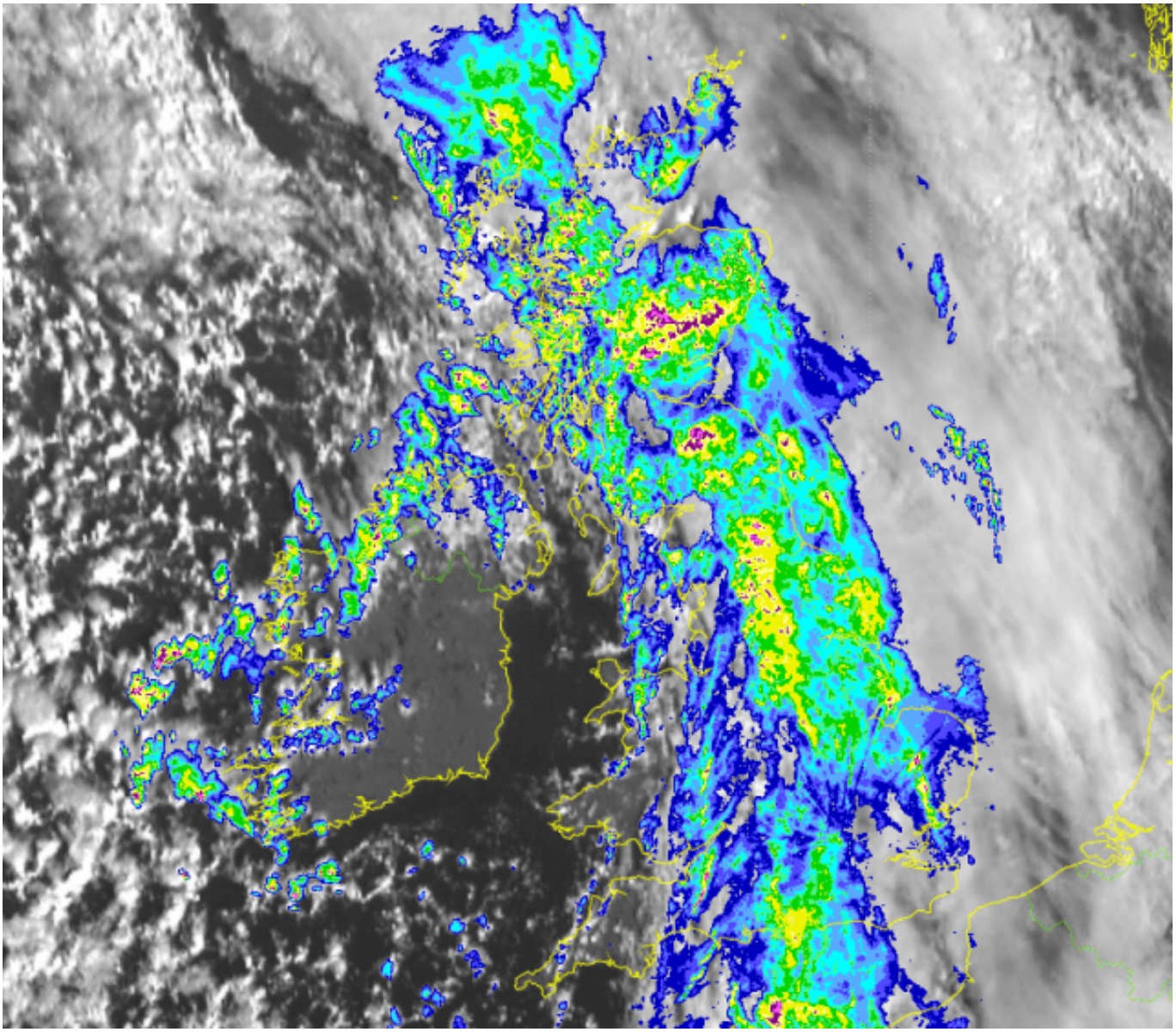
SITE NAME	AREA	RAINFALL (mm)
CAMBORNE	CORNWALL	44.8
LLYNFRYNACH	POWYS	43.8
SOUTH UIST	WESTERN ISLES	41.4
CARDINHAM	CORNWALL	40.2
KATESBRIDGE	COUNTY DOWN	34.6

Strongest wind gusts

There have been some strong wind gusts in parts, particularly across exposed western areas. The highest gusts are below:

DATE/TIME	SITE NAME	AREA	WIND GUST (MPH)
06/10/2014 03:00	SOUTH UIST RANGE	WESTERN ISLES	84
06/10/2014 05:00	ALTNAHARRA NO 2	SUTHERLAND	78
06/10/2014 02:00	TIREE	ARGYLL	77
06/10/2014 05:00	MACHRIHANISH	ARGYLL	75
06/10/2014 01:00	MAGILLIGAN NO 2	LONDONDERRY	70

Earlier rainfall image across the UK:



Weather outlook

The rain will continue to move east across the UK during the rest of today with drier conditions following for a time, before showers follow in places overnight. Although winds will tend to ease for most areas, further gales are expected across northeast Scotland through tomorrow. During this unsettled weather we'd encourage everyone to keep up to date with the latest forecasts and national severe weather warnings.

Date Created
October 2014

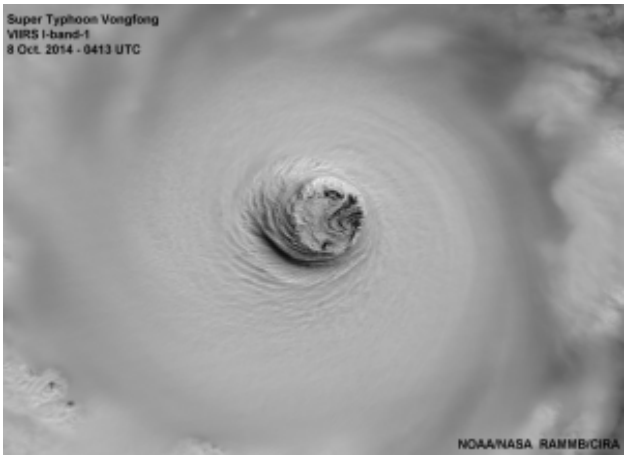
Japan and India Braced for Tropical Cyclones

Description

Last weekend Typhoon Phanfone brought strong winds and heavy rain to many parts of Japan causing damage and disruption to travel. Japan is now preparing for another typhoon which could be just as disruptive, if not more so.

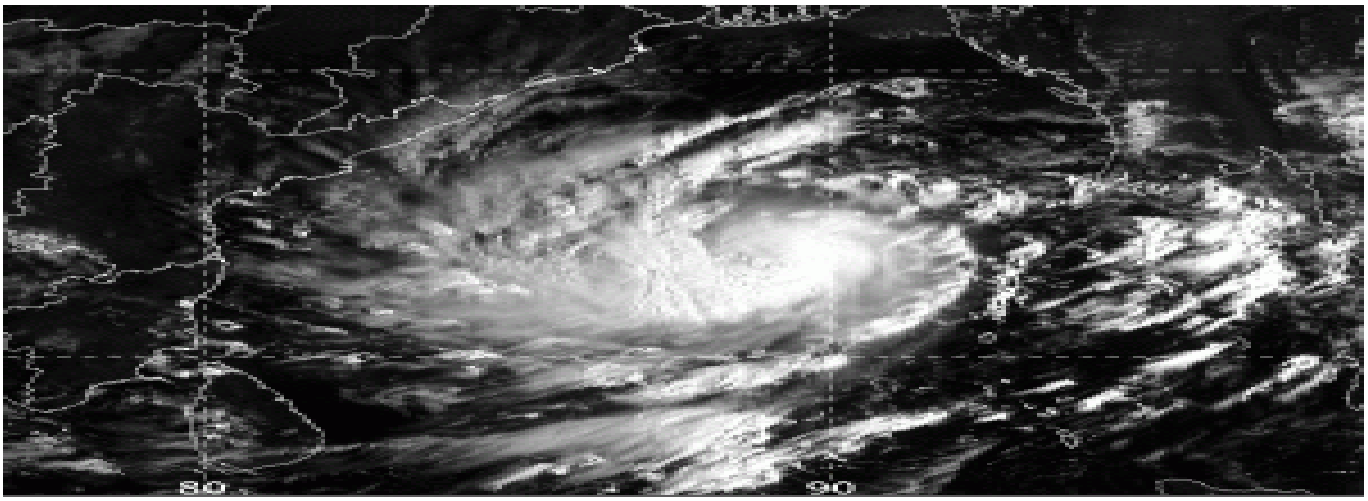
Typhoon Vongfong has been gathering strength and moving slowly across the western Pacific all week and has become the strongest tropical cyclone to have occurred anywhere in the world since the devastating Typhoon Haiyan which struck the Philippines last November. At its peak Vongfong was estimated to have sustained winds near 180 mph and a central pressure of 900 mb.

Forecasts for Typhoon Vongfong have been very consistent and predict that it will firstly cross some of the Ryukyu Islands of Japan at the weekend. The typhoon will then turn north-eastwards and cross Japan’s main islands at the beginning of next week starting with Kyushu in the south-west. At that time Vongfong is likely to be weaker than at present, but still expected to be a typhoon bringing strong winds and heavy rain and likely to cause disruption.



Typhoon Vongfong seen on 8 October 2014

Meanwhile, in the Bay of Bengal Tropical Storm Hudhud has formed and threatens India at the weekend. Exactly a year ago intense Cyclone Phailin formed in a similar location and took a similar track that Tropical Storm Hudhud is expected to take. Hudhud (an Omani name for a type of bird) is expected to make landfall on the Indian coast early on Sunday and bring stormy conditions to both Andhra Pradesh and Odisha states. By that time it is expected to have developed into a fully blown 'cyclone' – equivalent to a typhoon or hurricane.



Tropical Storm Hudhud seen on 9 October 2014
Image courtesy of the India Meteorological Department

Official warnings of west Pacific tropical storms are produced by the Japan Meteological Agency and north Indian Ocean warnings are produced by the India Meteorological Department. The Met Office routinely supplies predictions of cyclone tracks from its global forecast model to regional meteorological centres worldwide, which are used along with guidance from other models in the production of forecasts and guidance.

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Date Created
October 2014

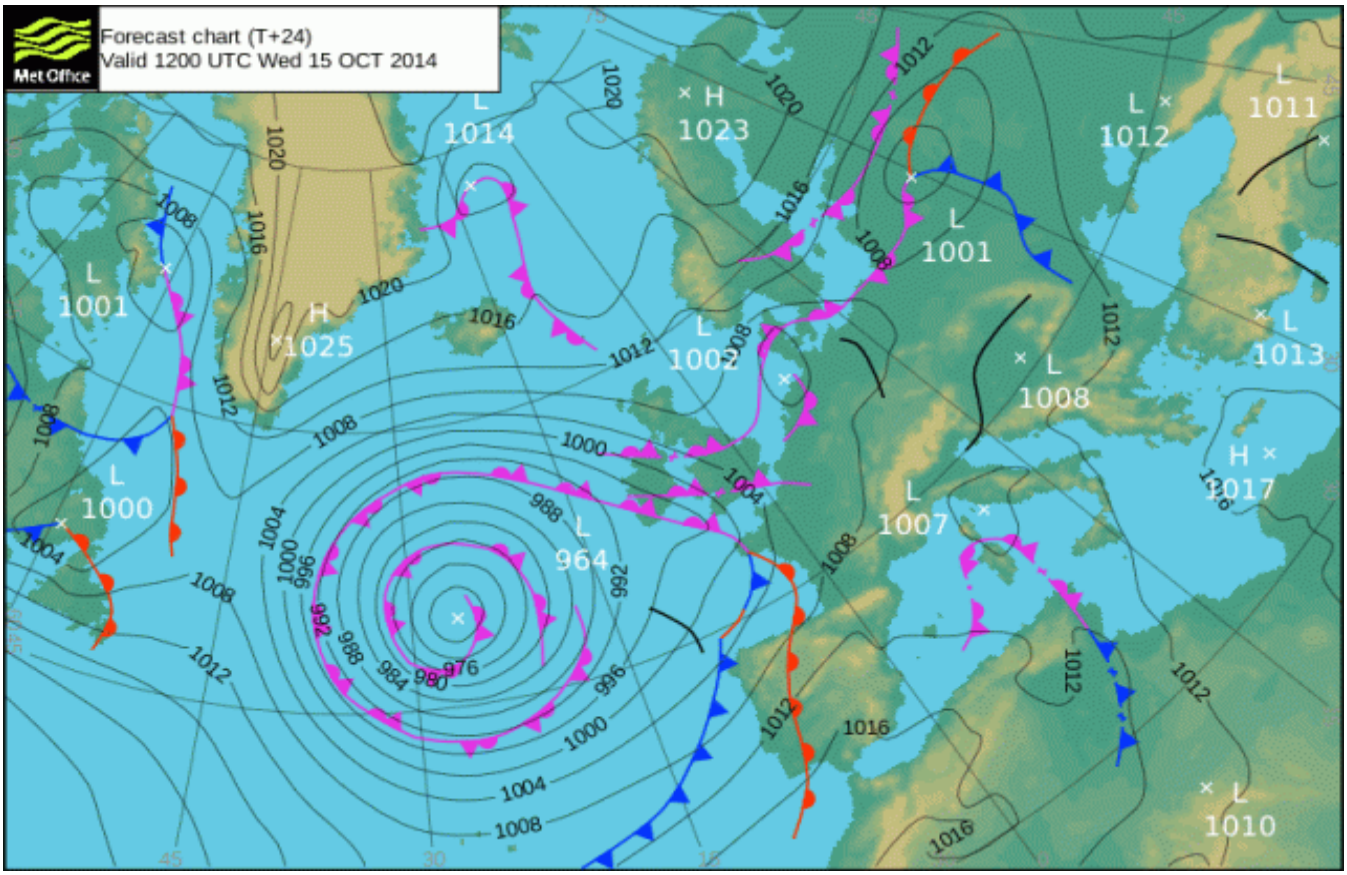
How will activity in the Atlantic affect UK weather?

Description

There’s lots of activity going on in the Atlantic at the moment – but how will it affect the UK?

Currently there is a big area of low pressure covering a large part of the Atlantic between North America and the UK.

While it is fairly large in its size, it’s not particularly intense, powerful or unusual.



Forecast chart for 1pm BST on Wednesday 15 October 2014, showing a large area of low pressure in the Atlantic.

This means that – while it may look impressive on the charts – it’s not going to bring anything out of the ordinary for the UK over the next few days.

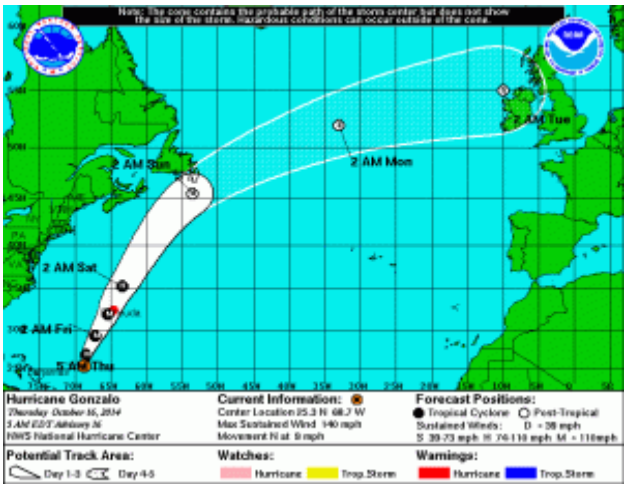
It will, however, be generally unsettled across many parts through Friday and the weekend, as the low pressure drives a weather system across the UK.

This will bring strong winds, with gusts of up to 50mph in the most exposed parts of the west, and rain in places. However, some parts will enjoy periods of drier and brighter weather.

Tied up in the general Atlantic circulation is an area of warm air which was originally part of tropical storm Fay.

This will bring very mild air across parts of the country, with daytime temperatures possibly reaching around 20C across southeastern areas by Saturday, well above the October average for the region of 15C.

While it will be very mild, it may not feel particularly warm given the windy and often wet conditions. The unsettled weather is expected to be fairly standard for the middle part of October.



Forecast track of Gonzalo from the US National Hurricane Center.

Over the other side of the Atlantic near Bermuda, Hurricane Gonzalo is currently expected to track north and then east across the ocean over the coming days.

There is large uncertainty about the potential track of this storm, with some models suggesting that the remnants could move across the UK whilst others show them staying away from our shores.

If the ex-tropical storm does move across the country, some parts could see gales and heavy rain, but currently extreme conditions look unlikely.

As ever, we'll keep a close eye on developments over the next few days and keep everyone up to date if it looks like there is any sign of severe weather heading for the UK.

Date Created
October 2014

Gonzalo set to batter Bermuda

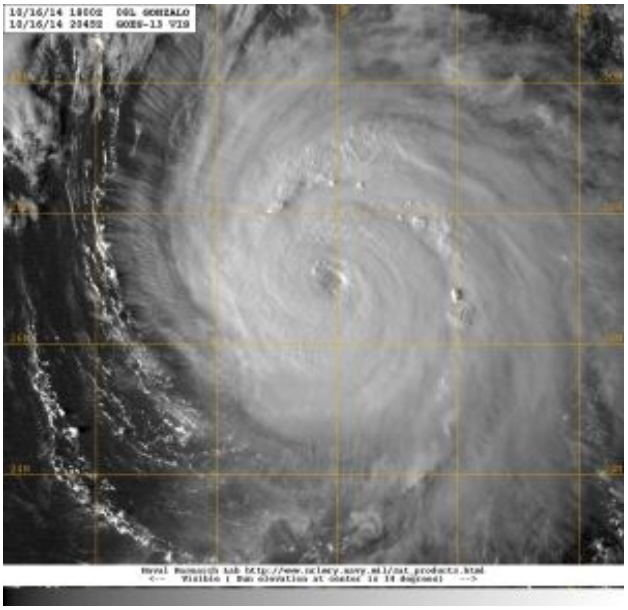
Description

The Atlantic hurricane season as a whole in 2014 has been fairly quiet, but the last week has seen two hurricanes develop. Fay briefly reached hurricane status and brushed passed Bermuda. However, this was just a foretaste of what is to come.

Tropical Storm Gonzalo formed just east of the Caribbean on Monday and passed over several islands such as Antigua, Anguilla and St. Martin bringing a period of strong winds and rain. However, it was after moving away from the Caribbean that Gonzalo rapidly strengthened into the strongest hurricane seen in the Atlantic since Hurricane Igor in 2010. At its peak, it was a category 4 hurricane with sustained winds of 145 mph. Since then there have been small fluctuations in intensity, but Gonzalo has maintained its status as a major hurricane.

The last major hurricane to impact Bermuda was Fabian in 2003 which produced sustained winds of 120 mph and a storm surge of three metres to coastal areas causing extensive destruction and some loss of life. Prior to this, we have to go back to 1926 to find a hurricane of similar intensity which struck Bermuda.

On its current forecast track the eye of Hurricane Gonzalo is expected to pass over or just to the west of Bermuda late today. Winds of over 100 mph are likely together with a storm surge similar to that seen in Hurricane Fabian and accompanied by heavy rain. Consistent forecasts of the track of Gonzalo have allowed residents several days to prepare for the onset of the hurricane which is likely to have a major impact on the island.



Hurricane Gonzalo 16.10.14

Having crossed Bermuda, Gonzalo is expected to race north-eastwards across the Atlantic. It will weaken as it crosses cooler waters and start to make the transition into a mid-latitude depression. Latest forecasts indicate that the remnants of Gonzalo are likely to pass over the northern UK late on Monday and early on Tuesday. It will bring a brief spell of wet and windy weather with gales in places – fairly typical for this time of year.

At this stage extreme conditions seem unlikely, but we'll keep a close eye on developments over the next few days and keep everyone up to date if it looks like there is any sign of severe weather heading for the UK.

Official warnings of Atlantic hurricanes are produced by the National Hurricane Center. The Met Office routinely supplies predictions of cyclone tracks from its global forecast model to regional meteorological centres worldwide, which are used along with guidance from other models in the production of forecasts and guidance.

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Date Created
October 2014

Windy weather on the way

Description

As forecast, Hurricane Gonzalo made landfall over Bermuda on Friday with rain and winds of up to 110 mph causing power cuts, flooding, felled trees and damaged buildings.

The storm has continued in its journey since then, and passed the Canadian island of Newfoundland during Sunday morning.

The remnants of this tropical storm are being caught up in the westerly flow across the Atlantic and will be drawn towards the UK, crossing the country on Monday night and early Tuesday.

By the time Gonzalo crosses the Atlantic, however, it will be a very different system to the hurricane that affected Bermuda.

It will undergo what meteorologists call ‘extra-tropical transition’, which means it loses the warm-core typical of a tropical cyclone and becomes a much more standard Atlantic low pressure system – like we regularly see around the UK at this time of year.

As such the low pressure is expected to produce wind strengths and rainfall amounts which are not unusual over the British Isles during the autumn and winter months.

Whilst there is good confidence that this system will cross the UK on Monday night and Tuesday morning, there is still something to play for in pinning down the exact location of the strongest winds.

The Met Office has issued a weather warning for wind for much of the UK for Tuesday, particularly since the strongest winds look to coincide with rush hour for some locations, leading to possible travel disruption.

You can see details of what to expect in the warnings page on our website. You can stay up to date with all the latest for the windy weather and what to expect for the rest of the week with our forecasts and warnings.

Date Created
October 2014

What is the wettest city in the UK?

Description

We often get asked the question about where is the wettest town or city in the UK – and there are some news stories on this subject circulating in the media at the moment.

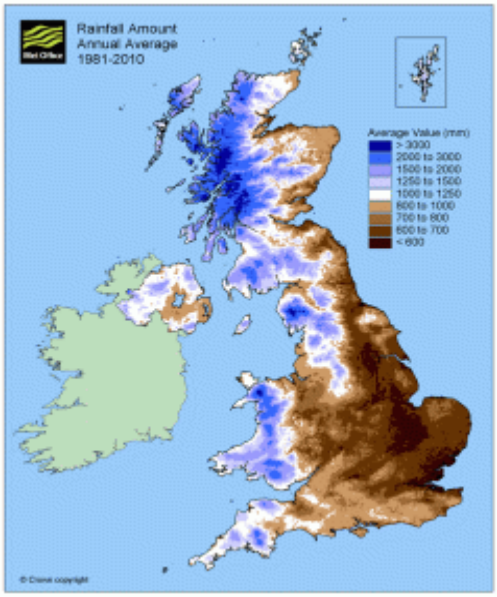
While the current stories use some of our figures, this isn't an analysis by us and wasn't done using our complete records from across the UK.

When it comes to answering what, on the face of it, is a relatively straightforward question – the reality is that it's a lot more tricky than it first seems.

First of all, which measure should you use? There are rain days, which denote every day which sees more than 1mm of rain. Then there is total rainfall, which denotes the total accumulated rainfall over a period of time.

Which gives the better picture of a rainy city? There's certainly room for debate.

Secondly, we have thousands of weather observation sites spread across the UK providing data on temperature, rainfall and other factors.



Map shows the 1981-2010 average annual UK rainfall based on individual station data – but can't be used to make conclusions about individual towns and cities.

Towns and cities are generally quite large features on a map and one area could potentially have

numerous weather stations.

Let’s take Huddersfield as an example. There are two rain gauges in the town that we have averages for – one on the west side sees 1028 mm a year, while another station further east sees 843 mm a year.

This demonstrates the fact that local features such as hills, or even mountains, as well as coasts and other features can all play a role in local rainfall – so there may be differences across a town or city.

It is possible to do a detailed analysis, but this would always require a clear basis for comparison.

It’s a lot more straightforward to look at individual stations. Using this data, we can see that the UK rain gauge in our archive with the highest average annual rainfall total is Crib Goch (Gwynedd) with 4635 mm of rain followed by Styhead (Cumbria) at 4562 mm.

For rain gauges located at elevations below 200 m the wettest place is Glenshiel Forest (Ross and Cromarty) at 3778 mm, but none of these are located in major towns or cities.

You can explore more about UK climate averages and statistics in our UK Climate pages.

Date Created
October 2014

Top UK wind speeds as Gonzalo’s remnants felt

Description

TABLE UPDATED AT 11:50AM

Many parts of the UK are seeing strong winds today as the remnants of ex-tropical storm Gonzalo pass over the north of the country.

Below are the top ten strongest gusts of wind we have recorded so far today. We’ll be updating this through the day with the latest information.

Time	Station	Area	Elevation	Max gust (MPH)
0600AM	WIGHT: NEEDLES OLD BATTERY	ISLE OF WIGHT	80	70
0300AM	ABERDARON	GWYNEDD	95	70
1000AM	ST BEES HEAD	CUMBRIA	124	69
0400AM	MUMBLES HEAD	WEST GLAMORGAN	43	67
1000AM	ISLAY: PORT ELLEN	ARGYLL	17	66
0300AM	CAPEL CURIG	GWYNEDD	216	66
1000AM	EMLEY MOOR	WEST YORKS	267	66
0400AM	LAKE VYRNWY	POWYS	360	63
0600AM	SALSBURGH	LANARKSHIRE	277	63
0400AM	MACHRIHANISH	ARGYLL	10	62

The Met Office has issued a severe weather warning for the winds today – you can see the details of this on our warnings pages.

Winds are expected to be strong through much of the day, and people are advised that there may be some traffic and travel disruption.

Rainfall

Ex-Gonzalo also brought a band of heavy rain across the UK earlier this morning, bringing some notable rainfall totals in places.

The table below shows the top ten UK rainfall totals recorded between 1am and 8am this morning.

Station	Area	Total (mm)
CLUANIE INN NO 3	ROSS & CROMARTY	38.0
CAPEL CURIG NO 3	GWYNEDD	34.4
ACHNAGART	ROSS & CROMARTY	30.6
TYNDRUM NO 3	PERTHSHIRE	27.6
KINLOCHEWE	ROSS & CROMARTY	25.8

RESALLACH	SUTHERLAND	23.4
SHAP	CUMBRIA	21.8
LOCH GLASCARNOCH	ROSS & CROMARTY	21.8
MORECAMBE NO 2	LANCASHIRE	20.2
LEVENS HALL	CUMBRIA	20.0

Date Created
October 2014

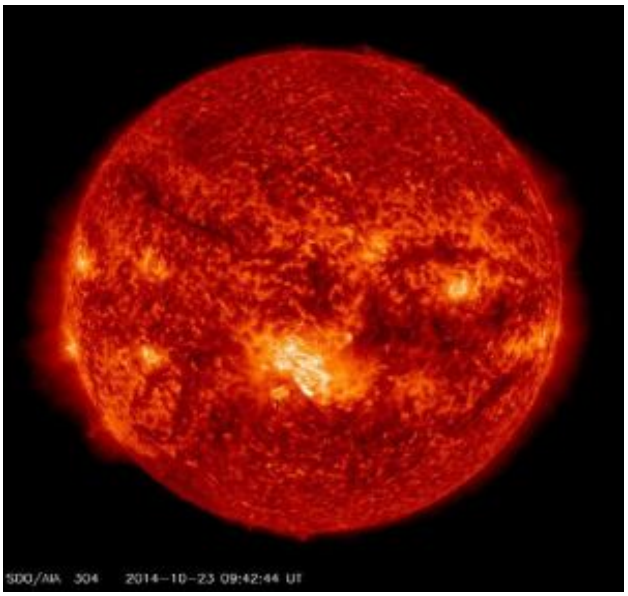
Met Office monitors giant sun spot

Description

The Met Office Space Weather Operations Centre is currently monitoring the biggest sun spot in this 11-year solar cycle, so big that it's about the size of Jupiter or 11 times bigger than the Earth. It is thought it might be the biggest for 25 years but this is still to be confirmed. However bigger doesn't mean more active or make it more likely that anything significant will happen.

Space weather forecasters look for features like the complexity of the magnetic field to determine how active it might be.

Over the last few days this sun spot has emitted a couple of strong, and a few moderate, solar flares but nothing out of the ordinary. The significant events we're looking for are Coronal Mass Ejections (CME) and to date there have been no CME associated with these flares. CME are eruptions of large amounts of matter and energetic particles from the solar atmosphere that can impact our technology here on Earth.



The light area in centre of this image is the largest sun spot in this 11 year solar cycle

The Met Office will continue to monitor solar activity and issue further information if the situation changes. For more information about space weather see our Space Weather pages

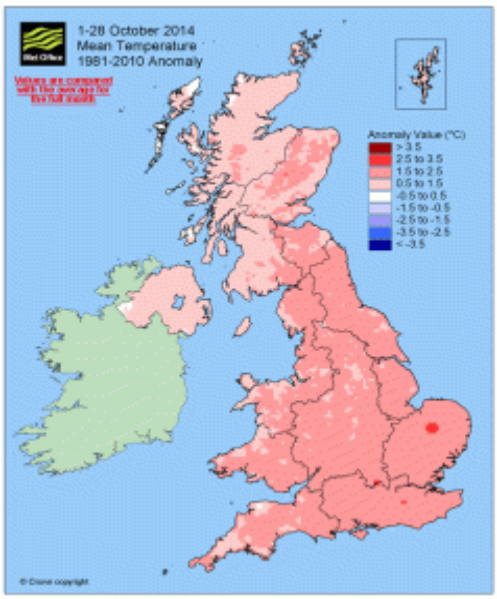
Date Created
October 2014

Warm and wet, but October is no thriller

Description

Early Met Office figures up to the 28th of October show it has been a warm and rather wet month compared to average, but it's not going to break any records.

The UK mean temperature for the month so far is 11.0C, which is 1.5C above the long-term (1981-2010) average.



Map showing the UK mean temperature for 1-28 Oct compared to the long-term (1981-2010) average.

While well above average, that's well short of the record of 12.2C set in 2001 and would currently rank 11th warmest in our digitised national records dating back to 1910.

Last year's October (11.2C), and that of 2011 (11.3C), were both warmer than this year's early figure.

As ever there are regional variations within the UK for this year, with the far north west of the UK hardly above normal while much of England has seen mean temperatures around 2C above normal.

This October continues the theme of above average temperatures for 2014. Nine out of the ten months this year have seen above average mean temperatures, with only August having been below average.

It's a similar story with UK rainfall in that it is wetter than average, but with no chance of breaking any records.

There has been 148.1mm of rain for the UK up to the 28th of the month, which is 116% of the long-

term full-month average (you'd expect about 91% of the average after 28 days in a 'normal' month).

This would rank it around mid-table in the records – nowhere near the October record of 194.8mm set in 2000. While the rainfall will go up when the final few days are added, it's not going to top that.

Again there are regional variations, with some parts of Scotland, the Isle of Man and Cumbria much wetter than average while some parts are slightly drier than average.

Sunshine hasn't been too remarkable, with figures below average for most areas.

	Mean temp		**Sunshine**		**Rainfall**	
1-28 Oct	**Deg C**	**Diff to avg**	**Hours**	**% of Oct Avg**	**Actual mm**	**% of Oct Avg**
UK	11.0	1.5	77.8	84	148.1	116
England	12.2	1.8	86.6	84	100.8	110
Wales	11.4	1.6	73.1	79	160.2	94
Scotland	9.2	1.2	62.6	83	226.7	129
N Ireland	10.3	0.9	86.7	99	124.0	104

Date Created
October 2014